



June 2015

NAVY WORKING CAPITAL FUND

Budgeting for Carryover at Fleet Readiness Centers Could Be Improved

Report Documentation Page				Form Approved OMB No. 0704-0188	
Public reporting burden for the collection of information is estimated to average 1 hour per response, including the time for reviewing instructions, searching existing data sources, gathering and maintaining the data needed, and completing and reviewing the collection of information. Send comments regarding this burden estimate or any other aspect of this collection of information, including suggestions for reducing this burden, to Washington Headquarters Services, Directorate for Information Operations and Reports, 1215 Jefferson Davis Highway, Suite 1204, Arlington VA 22202-4302. Respondents should be aware that notwithstanding any other provision of law, no person shall be subject to a penalty for failing to comply with a collection of information if it does not display a currently valid OMB control number.					
1. REPORT DATE JUN 2015		2. REPORT TYPE		3. DATES COVERED 00-00-2015 to 00-00-2015	
4. TITLE AND SUBTITLE Navy Working Capital Fund: Budgeting for Carryover at Fleet Readiness Centers Could Be Improved				5a. CONTRACT NUMBER	
				5b. GRANT NUMBER	
				5c. PROGRAM ELEMENT NUMBER	
6. AUTHOR(S)				5d. PROJECT NUMBER	
				5e. TASK NUMBER	
				5f. WORK UNIT NUMBER	
7. PERFORMING ORGANIZATION NAME(S) AND ADDRESS(ES) U.S. Government Accountability Office, 441 G Street NW, Washington, DC, 20548				8. PERFORMING ORGANIZATION REPORT NUMBER	
9. SPONSORING/MONITORING AGENCY NAME(S) AND ADDRESS(ES)				10. SPONSOR/MONITOR'S ACRONYM(S)	
				11. SPONSOR/MONITOR'S REPORT NUMBER(S)	
12. DISTRIBUTION/AVAILABILITY STATEMENT Approved for public release; distribution unlimited					
13. SUPPLEMENTARY NOTES					
14. ABSTRACT					
15. SUBJECT TERMS					
16. SECURITY CLASSIFICATION OF:			17. LIMITATION OF ABSTRACT Same as Report (SAR)	18. NUMBER OF PAGES 42	19a. NAME OF RESPONSIBLE PERSON
a. REPORT unclassified	b. ABSTRACT unclassified	c. THIS PAGE unclassified			

GAO Highlights

Highlights of [GAO-15-462](#), a report to congressional requesters

Why GAO Did This Study

Three Navy FRCs support combat readiness by providing repair services to keep Navy units operating worldwide. To the extent that the FRCs do not complete work ordered and funded by year-end, the work and related funding will be carried over into the next fiscal year. The Department of Defense (DOD) established a formula based on new orders received from customers for determining the allowable carryover amount at year-end as defined by the DOD Financial Management Regulation. As requested, GAO reviewed issues related to FRC carryover.

GAO's objectives were to determine (1) the extent to which the FRCs' actual carryover differed from the allowable amounts and the reasons for any differences, (2) the extent to which the FRCs' reported budget information on carryover differed from reported actual information and the reasons for any differences, and (3) the key drivers for orders with large carryover balances for fiscal years 2013 and 2014 and the actions the FRCs are taking or planning to take to reduce carryover. GAO reviewed carryover guidance, analyzed carryover and related data for the FRCs for fiscal years 2004 to 2014, and interviewed Navy officials.

What GAO Recommends

GAO recommends that DOD improve the budgeting for carryover by reporting the purpose and amount of waivers in FRC budgets and augmenting Navy guidance to include trend data on actual orders in developing budget estimates. DOD concurred with GAO's recommendations and cited related actions planned or under way.

View [GAO-15-462](#). For more information, contact Asif A. Khan at (202) 512-9869 or khana@gao.gov.

June 2015

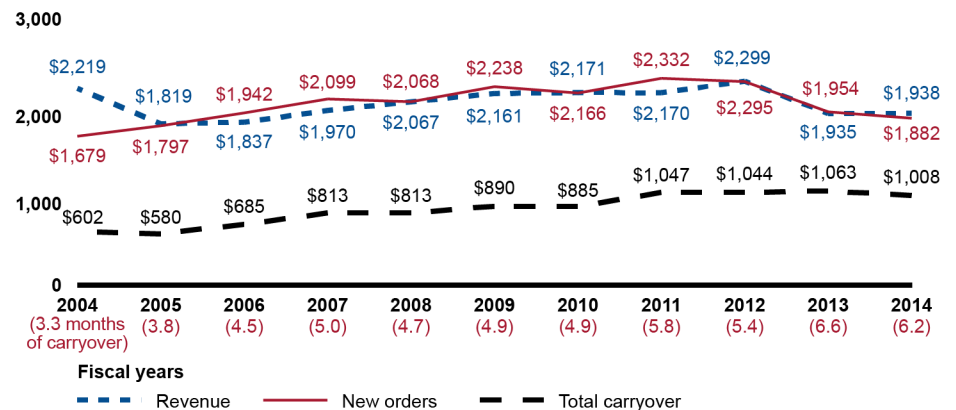
NAVY WORKING CAPITAL FUND

Budgeting for Carryover at Fleet Readiness Centers Could Be Improved

What GAO Found

GAO's analysis of Navy Working Capital Fund Fleet Readiness Centers' (FRC) budgets found that actual adjusted carryover exceeded allowable carryover in 10 of 11 fiscal years reviewed because orders exceeded work performed (revenue) by more than expected. As a result, total carryover grew to about \$1 billion at the end of fiscal year 2014. In fiscal year 2014, the FRCs' actual adjusted carryover amount was under the allowable amount because the FRCs received a new waiver that reduced the adjusted carryover below the allowable amount. The FRCs did not present the purpose and amount of the waiver in their budget to Congress. Having complete information in the budget is needed to help policymakers make informed decisions.

Fleet Readiness Centers' New Orders, Revenue, Total Carryover, and Months of Carryover
Dollars in millions



Source: GAO analysis of Fleet Readiness Centers' data. | GAO-15-462

The FRCs budgeted the carryover amount to be under the allowable amount in 10 out of the 11 fiscal years GAO reviewed. In fiscal year 2004, the budgeted amount was greater than the allowable amount by \$40 million. In 10 of the 11 years, the actual carryover information was greater than the budgeted carryover information by a low of \$30 million in fiscal year 2010 to a high of \$285 million in fiscal year 2007. According to Navy officials, these differences can be attributed to uncertainty in overseas contingency operations orders or changing customer requirements after budget preparations. Although the Navy has efforts ongoing to address these two issues in the future, GAO found that the Navy's guidance does not require trend analysis. Such analysis could help ensure more accurate estimates.

GAO identified four key drivers for large FRC carryover balances in fiscal years 2013 and 2014: (1) orders for work scheduled to begin in the fourth quarter carried over into the next fiscal year; (2) work on F/A-18 Hornet aircraft required structural repair and the FRCs had limited engineers and artisans, support equipment, and facilities to perform the work; (3) work on crash-damaged aircraft was difficult to predict and required nonstandard repairs that necessitated long lead time for parts to perform the work; and (4) the unavailability of parts to perform work. The Navy is taking several actions, such as hiring engineers and artisans to perform F/A-18 Hornet work.

Contents

Letter		1
	Background	4
	FRC Actual Adjusted Carryover Was over the Allowable Amount for 10 of the Past 11 Fiscal Years Because Orders Exceeded Work Performed by More Than Expected	7
	FRC Actual Carryover Information Generally Exceeded Budget Estimates Because the FRCs Underestimated New Orders	13
	Four Key Drivers Led to Carryover at the End of Fiscal Years 2013 and 2014, and the Navy Has Actions Under Way to Address Some of Them	17
	Conclusions	30
	Recommendations for Executive Action	31
	Agency Comments	31
Appendix I	Scope and Methodology	33
Appendix II	Comments from the Department of Defense	35
Appendix III	GAO Contact and Staff Acknowledgments	37
Tables		
	Table 1: Fleet Readiness Centers' Locations and Principal Work	4
	Table 2: Fleet Readiness Centers' (FRC) Actual Adjusted Carryover and Allowable Carryover for Fiscal Years 2004 through 2014	7
	Table 3: Actual and Budgeted Adjusted Fleet Readiness Centers' Carryover That Was over or under the Allowable Amounts for Fiscal Years 2004 through 2014	14
	Table 4: Actual and Budgeted Fleet Readiness Centers' New Orders for Fiscal Years 2004 through 2014	15
	Table 5: Fleet Readiness Center Southeast and Southwest F/A-18 Hornet Carryover and Months of Carryover for Fiscal Years 2011 through 2014	22
	Table 6: Fleet Readiness Center Southeast and Southwest F/A-18 Hornet Aircraft Workload by High Flight Hour and Total	23
	Table 7: Number of Days Repair Items Waited for Parts at Fleet Readiness Center East as of September 2014	29

Figures

Figure 1: Fleet Readiness Centers' New Orders, Revenue, Total Carryover, and Months of Carryover for Fiscal Years 2004 through 2014	9
Figure 2: Side View of Work on High Flight Hour F/A-18 Hornet Aircraft	19
Figure 3: Top View of Work on High Flight Hour F/A-18 Hornet Aircraft	20
Figure 4: F/A-18 Super Hornet Aircraft with Collision Damage	25
Figure 5: F/A-18 Super Hornet Aircraft with Fire Damage	26

Abbreviations

DLA	Defense Logistics Agency
DOD	Department of Defense
FRC	Fleet Readiness Centers

This is a work of the U.S. government and is not subject to copyright protection in the United States. The published product may be reproduced and distributed in its entirety without further permission from GAO. However, because this work may contain copyrighted images or other material, permission from the copyright holder may be necessary if you wish to reproduce this material separately.



June 30, 2015

The Honorable Kelly Ayotte
Chairman
Subcommittee on Readiness and Management Support
Committee on Armed Services
United States Senate

The Honorable Jeanne Shaheen
United States Senate

The Navy operates three depot maintenance Fleet Readiness Centers (FRC) that are part of the Navy Working Capital Fund.¹ These FRCs repair aircraft, engines, and components; manufacture parts and assemblies; provide engineering services for developing hardware design changes; and furnish technical and other services on maintenance and logistics problems. From fiscal year 2004 through fiscal year 2014, the amount of new orders received to perform this work ranged from \$1.7 billion to \$2.3 billion. In fiscal year 2014, the Navy reported that in-house work performed at the three FRCs included the repair of 419 aircraft, 1,622 aircraft engines, and 34,280 inventory items. Work completed at the FRCs ensures that deployed and next-to-deploy units have the battle-ready items needed to train and fight in current and future military operations.

When Navy FRC work has been ordered and funded (obligated) by customers (such as the military services) but has not been completed at the end of a fiscal year, it is referred to as carryover. The Department of Defense (DOD) has established a formula based on new orders received from customers for determining the amount of carryover allowed at the end of each fiscal year as defined by the DOD Financial Management Regulation. The congressional defense committees have recognized that some carryover is appropriate to facilitate a smooth flow of work during the transition from one fiscal year to the next. However, past

¹The Navy operates eight FRCs, but only three are funded through the Navy Working Capital Fund: FRC East, Cherry Point, North Carolina; FRC Southeast, Jacksonville, Florida; and FRC Southwest, San Diego, California. For purposes of this report, all references to FRCs refer only to these three.

congressional defense committee reports have raised concerns that the level of carryover in military service working capital funds may be more than is needed. Too much carryover could result in the working capital fund receiving funds from customers in one fiscal year but not performing the work until well into the next fiscal year or years. Further, excessive amounts of carryover may result in future appropriations or budget requests being subject to reductions by DOD and the congressional defense committees during the budget review process. For example, according to the explanatory statement accompanying DOD's fiscal year 2013 appropriations, congressional conferees agreed to reduce Army, Navy, Air Force, and Marine Corps fiscal year 2013 operation and maintenance appropriations by a total of \$332.3 million because of concerns about excess carryover.²

You asked us to review issues related to Navy FRC carryover. Our objectives were to determine (1) the extent to which the Navy FRCs' actual carryover differed from the allowable amounts from fiscal years 2004 through 2014 and the reasons for any differences; (2) the extent to which the Navy FRCs' reported budget information on carryover differed from reported actual information on carryover from fiscal years 2004 through 2014 and the reasons for any differences; and (3) the key drivers for orders with large carryover balances for fiscal years 2013 and 2014 and the actions, if any, the Navy's FRCs are taking or planning to take to reduce carryover.

To address the first and second objectives, we obtained and analyzed FRC reports and Navy Working Capital Fund budget estimates submitted to Congress that contained information on budgeted and actual carryover and the allowable amount of carryover for fiscal years 2004 to 2014. We analyzed carryover since fiscal year 2004 because prior to fiscal year 2004, DOD had a different policy for determining the allowable amount of carryover. We met with responsible officials from Navy headquarters and the FRCs to determine the reasons for variances between (1) actual carryover and the allowable amount of carryover and (2) budgeted and actual carryover. We also met with these officials to discuss actions the Navy was taking to improve budgeting and management of carryover, including the reduction of carryover amounts. Further, we identified and analyzed any adjustments made by the Navy that increased the allowable

²159 Cong. Rec. S1350-61 (Mar. 11, 2013).

carryover amounts or reduced the amount of carryover. We reviewed DOD's guidance for exceptions to the carryover policy and discussed any exceptions with officials from the Office of the Under Secretary of Defense (Comptroller), Navy headquarters, and the FRCs to obtain explanations for the exceptions.

To address the third objective, we met with responsible officials from Navy headquarters and the FRCs to identify contributing factors that led to carryover. We focused on fiscal year 2013 and 2014 carryover balances to identify current issues contributing to carryover. We also performed walk-throughs of the three FRCs' depot maintenance operations to observe the work being performed and discussed with officials the causes for workload carrying over from one fiscal year to the next. Further, to corroborate the information provided by FRC officials, we obtained and analyzed 60 customer orders to repair, among other things, aircraft, engines, and components (30 orders each for fiscal years 2013 and 2014) that had the largest dollar amount of carryover. Carryover amounts associated with these orders represented 38 percent and 33 percent of the FRCs' total carryover for fiscal years 2013 and 2014, respectively. We also discussed and obtained documentation on the actions the FRCs are taking to better manage and reduce carryover.

We obtained the financial and logistical data in this report from official budget documents and the Defense Industrial Financial Management System used by the FRCs. To assess the reliability of the data, we analyzed carryover and related data, interviewed Navy officials knowledgeable about the carryover data, and reviewed customer orders to determine whether they were adequately supported by documentation. On the basis of procedures performed, we have concluded that these data were sufficiently reliable for the purposes of this report. See appendix I for additional details on our scope and methodology.

We conducted this performance audit from June 2014 to June 2015 in accordance with generally accepted government auditing standards. Those standards require that we plan and perform the audit to obtain sufficient, appropriate evidence to provide a reasonable basis for our findings and conclusions based on our audit objectives. We believe that the evidence obtained provides a reasonable basis for our findings and conclusions based on our audit objectives.

Background

The three Navy FRCs provide services for a variety of customers, including the Army, the Navy, the Air Force, non-DOD agencies, and foreign countries.³ Most of the work is for the Navy. Operating under the working capital fund concept, these FRCs are intended to (1) generate sufficient resources to cover the full costs of their operations and (2) operate on a break-even basis over time. Customers, such as the Navy, use appropriated funds (typically operation and maintenance or procurement appropriations) to finance orders placed with the FRCs. The FRCs provide the Navy an in-house industrial capability to conduct depot-level maintenance, repair, and upgrade of aircraft, engines, and aircraft components. Table 1 describes the locations and principal work for each FRC.

Table 1: Fleet Readiness Centers' Locations and Principal Work

Fleet Readiness Centers' (FRC) locations	Principal work: aircraft, engines, and major commodities
FRC East, Cherry Point, North Carolina	AV-8B, H-53, H-1, EA-6B, CH-46, and MQ-8 aircraft; F402, T400, T58, and T64 engines; auxiliary power units; and gas turbine compressor engines
FRC Southeast, Jacksonville, Florida	P-3, F/A-18, EA-6B, H-60, T34/T44, T-6, and MQ-8 aircraft; F414, J52, and TF34 engines; and structural, mechanical, avionics, and engine components
FRC Southwest, San Diego, California	F/A-18, E-2, C-2, H-1, H-53, H-60, AV-8, and MQ-8 aircraft; the LM2500 engine; and aircraft and engine components

Source: Navy. | GAO-15-462

Carryover and Its Use

When Navy FRC work has been ordered and funded (obligated) by customers but has not been completed at the end of a fiscal year, it is referred to as carryover. Some carryover is appropriate in order for working capital fund activities, such as the FRCs, to ensure the continuity of operations from one fiscal year to the next. For example, if customers

³The non-DOD agencies are other United States federal agencies that provide orders to the FRCs, such as the National Oceanic and Atmospheric Administration for repair of aircraft.

do not receive sufficient appropriations at the beginning of the fiscal year,⁴ carryover is necessary to ensure that the FRCs (1) have enough work to continue operations in the new fiscal year and (2) retain the appropriate number of personnel with sufficient skill sets to perform depot maintenance work. Too little carryover could result in inefficient use of resources with some personnel not having work to perform at the beginning of the fiscal year. On the other hand, too much carryover could result in the working capital fund receiving funds from customers in one fiscal year but not performing the work until well into the next fiscal year or years. By optimizing the amount of carryover, DOD can use its resources in the most efficient and effective manner and minimize the backlog of work.

DOD's Carryover Policy

DOD's Financial Management Regulation 7000.14-R, volume 2B, chapter 9,⁵ provides that the allowable amount of carryover each year is to be based on the dollar amount of new orders received that year and the outlay rate of the customers' appropriations financing the work.⁶ For example, customer orders financed with a specific appropriation total \$100. If the outlay rate for this appropriation is 60 percent, then the working capital fund activity group is allowed to carry over \$40 (i.e., $\$100 - [\$100 \times 60 \text{ percent}] = \40). The DOD carryover policy further provides that the work on the current fiscal year's orders is expected to be completed by the end of the following fiscal year. For example, for an order accepted in fiscal year 2014, the work is expected to be completed at the end of fiscal year 2015.

⁴In recent years, DOD has often started the year under a continuing resolution, a temporary funding measure which typically continues the previous year's funding level and imposes certain limitations on agency spending until a full-year appropriation is passed into law.

⁵The DOD Financial Management Regulation directs statutory and regulatory financial management requirements, systems, and functions for all appropriated and nonappropriated, working capital, revolving, and trust fund activities. See DOD Financial Management Regulation 7000.14-R, *Introduction*, p. I-3 (June 2011).

⁶The outlay rate for appropriations is contained in the DOD Financial Summary Tables, which are published each year. The outlay rates provide a profile of how DOD expects money appropriated to be spent over time according to the type of program. For example, aircraft procurement is allowed to be spent over a period of several years. Each appropriation category has an outlay profile that specifies the percentage of the appropriation that should be spent in the first year of appropriation, the second year, and so on, until 100 percent is spent.

For orders funded with procurement appropriations, the Office of the Under Secretary of Defense (Comptroller) implemented a change to the DOD Financial Management Regulation to require the second year published outlay rate be used to calculate the allowable carryover amount. This change became effective for the fiscal year 2015 budget which affected the fiscal year 2013 actual calculation for allowable carryover. For example, for a procurement-funded order accepted in fiscal year 2014, the work is expected to be completed at the end of fiscal year 2016. DOD's Financial Management Regulation also provides that (1) nonfederal orders, non-DOD orders, foreign military sales, work related to base realignment and closure, and work in progress⁷ are to be excluded from the carryover calculation; (2) exceptions to the carryover policy approved by the Director for Revolving Fund, Office of the Under Secretary of Defense (Comptroller), are to be excluded from the carryover calculation; and (3) the reported actual carryover after applying these exclusions and exceptions (which is referred to as actual adjusted carryover in this report) is then compared to the amount of allowable carryover that was calculated using the above-described outlay rate method to determine whether the actual carryover amount is over or under the allowable carryover amount.

To the extent that actual adjusted carryover exceeds the allowable carryover, DOD and the congressional defense committees may reduce future budgets. According to the DOD Financial Management Regulation, this carryover policy allows for an analytical-based approach that holds working capital fund activities to the same outlay standard as the general fund and allows for meaningful budget execution analysis. Requests for exceptions to the carryover policy (referred to as waivers for the purposes of this report) must be submitted by the military services to the Director for Revolving Funds, Office of the Under Secretary of Defense (Comptroller), separate from the budget documents. The Navy generally submits the request for waivers at the end of the fiscal year. Office of the Under Secretary of Defense (Comptroller) officials told us that they review requests for waivers to the carryover policy on a case-by-case basis. Depending on the request, they may ask for additional information to evaluate the request.

⁷DOD's Financial Management Regulation 7000.14-R, volume 2B, chapter 9, provides that work in progress equals the amount of customer work which has been performed, but not yet billed.

FRC Actual Adjusted Carryover Was over the Allowable Amount for 10 of the Past 11 Fiscal Years Because Orders Exceeded Work Performed by More Than Expected

Our analysis of the FRC reports shows that FRC actual adjusted carryover exceeded its allowable carryover amount each year from fiscal year 2004 through fiscal year 2013 because orders exceeded work performed by more than expected. The amounts of carryover that exceeded the allowable amounts for that period ranged from less than \$1 million in fiscal year 2005 to \$121 million in fiscal year 2011. In fiscal year 2014, the FRCs' actual adjusted carryover amount was under the allowable amount for the first time in 11 years because the FRCs received a new waiver that reduced the actual adjusted carryover amount below the allowable amount. However, the Navy did not consistently or comprehensively present waiver information that affected the FRCs' actual adjusted carryover in the Navy Working Capital Fund budget submissions to Congress.

FRCs' Actual Adjusted Carryover Consistently Exceeded Allowable Amounts from Fiscal Years 2004 through 2013

Table 2 shows the FRCs' actual adjusted carryover, allowable carryover, and the amount over (or under) the allowable carryover at the end of fiscal years 2004 through 2014.

Table 2: Fleet Readiness Centers' (FRC) Actual Adjusted Carryover and Allowable Carryover for Fiscal Years 2004 through 2014

Dollars in millions			
Fiscal year	Actual adjusted carryover	Allowable carryover	Actual over (under) allowable amount
2004	\$466	\$461	\$5
2005	470	470	0 ^a
2006	591	575	16
2007	722	639	83
2008	709	699	10
2009	771	756	15
2010	768	746	22
2011	908	787	121
2012	807	721	86
2013	944	941	3
2014	716	743	(27)

Source: GAO analysis of Fleet Readiness Centers' budget data. | GAO-15-462

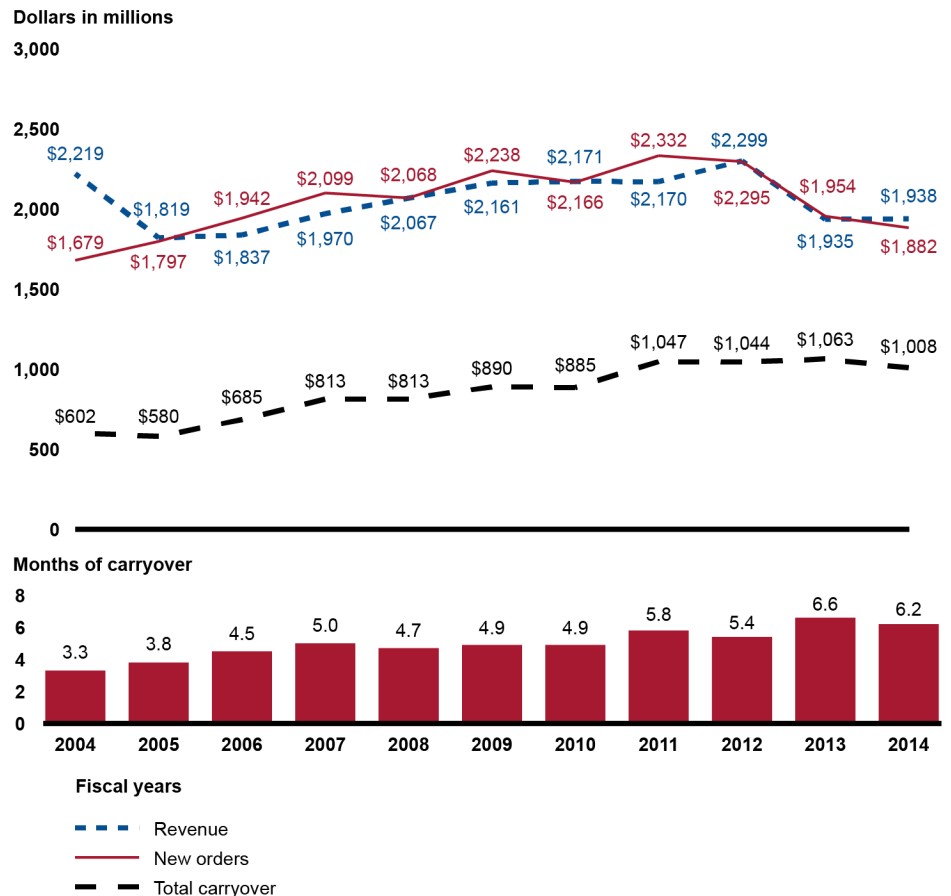
Note: These dollar amounts are actual dollars and are not adjusted for inflation.

^aThe FRCs' actual carryover slightly exceeded the allowable carryover amount in fiscal year 2005. However, because of rounding, the amount is shown as zero.

Actual adjusted carryover exceeded the allowable amount for 10 of the 11 fiscal years because the FRCs' total carryover (not adjusted for waivers) increased gradually from the end of fiscal year 2004 through the end of fiscal year 2013, as shown in figure 1. This occurred because new orders received from customers generally met or exceeded the FRCs' work performed (revenue) for most of that period. As a result, the dollar amount of carryover and the number of months of carryover increased.⁸

⁸The number of months of carryover is a calculation to show the average time required to work off the year-end carryover amount. It is calculated by dividing total revenue earned during the year by 12 months to determine the average revenue earned by month. The total carryover at year-end is then divided by the average revenue earned by month to determine the number of months of carryover. The calculated amount represents the total number of months to perform the work, which includes labor, material, and overhead costs.

Figure 1: Fleet Readiness Centers' New Orders, Revenue, Total Carryover, and Months of Carryover for Fiscal Years 2004 through 2014



Source: GAO analysis of Fleet Readiness Centers' data. | GAO-15-462

Notes: The carryover amounts presented in this figure are the total carryover amounts and are not adjusted for waivers. These dollar amounts are actual dollars and are not adjusted for inflation.

Our analysis of total carryover (without adjustments) shows that the Navy FRCs' total carryover gradually increased from \$602 million in fiscal year 2004 to \$1,008 million in fiscal year 2014—a \$406 million increase. Total carryover increased because the accumulated dollar amount of new orders accepted by the FRCs exceeded the accumulated dollar amount of work performed by \$406 million from the end of fiscal year 2004 through fiscal year 2014. For fiscal years 2006, 2007, and 2011, new orders exceeded revenue by \$396 million and accounted for 98 percent of the \$406 million. As a result, carryover steadily increased from 3.3 months of work at the end of fiscal year 2004 to 6.2 months of work at the end of

fiscal year 2014. Carryover reached a high point of 6.6 months of work for fiscal year 2013. The number of months of carryover represents the length of time required by the FRCs to work off the year-end carryover amount before they run out of work and would need new orders from customers to continue their operations. Different shops (such as aircraft, engines, and components) would run out of work at different times during the fiscal year depending on the amount of carryover for the individual shops.

Navy headquarters and FRC officials stated that carryover exceeded allowable amounts because orders received from customers exceeded work performed by more than expected. Navy headquarters officials told us that budgeting for new orders was affected by the anticipated supplemental appropriations for overseas contingency operations.⁹ Navy headquarters officials said that they did not include overseas contingency operations orders in the budget because of the uncertainty related to the amount of overseas contingency operations funds the Navy would receive in the supplemental appropriations for depot maintenance work. Navy headquarters and FRC officials and the budget documentation we reviewed provided three reasons why new orders exceeded revenue by a cumulative \$406 million from the end of fiscal year 2004 through fiscal year 2014.

- For fiscal years 2006 and 2007, the FRCs received an increase in orders from their customers in support of the Global War on Terrorism.
- In fiscal year 2011, the FRCs received a significantly greater amount of orders to repair crash-damaged aircraft compared to prior years. The workload was unplanned, and the aircraft required nonstandard repairs, which necessitated both a long lead time obtaining parts and engineering assistance for developing repair solutions on the aircraft, which delayed work on the orders.
- The FRCs began receiving an increased number of orders for the repair of high flight hour F/A-18 Hornet aircraft in fiscal year 2011 because the F/A-18 Hornets experienced significant material

⁹In 2009, we reported that starting with the fiscal year 2009 supplemental request in April 2009, the administration now refers to funds for the operations in Iraq and Afghanistan as Overseas Contingency Operations funds instead of the Global War on Terrorism funds. GAO, *Overseas Contingency Operations: Reported Obligations for the Department of the Defense*, [GAO-09-791R](#) (Washington, D.C.: July 10, 2009).

degradation as a result of the aircraft exceeding their design life. Similar to crash-damaged aircraft, repairs on high flight hour F/A-18 Hornet aircraft required nonstandard repairs, which necessitated long lead time for parts and engineering assistance for developing repair solutions. Increased carryover that resulted from the receipt of orders for the repair of crash-damaged and high flight hour aircraft is discussed more fully later in the report.

Navy Did Not Consistently or Comprehensively Present Waiver Information That Affected Actual Adjusted Carryover in the Budget

Waivers to the carryover policy affect the actual adjusted carryover calculation and may affect whether the adjusted actual carryover is over or under the allowable amount. Our analysis of the carryover information found that the FRCs complied with the DOD Financial Management Regulation for calculating the allowable and actual adjusted carryover amounts. Further, the Navy and the Office of the Under Secretary of Defense (Comptroller) followed procedures for requesting and approving waivers as contained in the DOD Financial Management Regulation. However, the FRCs did not identify and report consistent or complete waiver information for inclusion in the Navy Working Capital Fund budget submission to Congress.

The FRCs develop their budget estimates, which are reviewed by Naval Air Systems Command and Navy headquarters. These budget estimates are then included in the Navy Working Capital Fund budget submission to Congress. Each budget provides information for 3 fiscal years. For example, the fiscal year 2014 budget contains information on (1) the fiscal year 2014 budget, (2) the fiscal year 2013 revised budget, and (3) the fiscal year 2012 actual information. Our analysis of Navy Working Capital Fund budgets shows that the Navy inconsistently reported waiver information and omitted certain waiver information. Specifically, the Navy (1) presented a purpose for waivers to the carryover policy in one fiscal year budget, but did not present the purpose for waivers in other fiscal year budgets, and (2) did not report the dollar amount of each approved waiver in any of the budgets we reviewed. Without the consistent and complete reporting of waiver information, the congressional defense committees did not have complete information for making budget decisions. The following are two examples in which FRC carryover waiver information was presented inconsistently or incompletely in the Navy Working Capital Fund budgets.

- In the FRC section of the fiscal year 2014 Navy Working Capital Fund budget, which included the fiscal year 2012 actual carryover information, the FRCs adjusted the fiscal year 2012 actual carryover

information for two approved carryover waivers totaling \$132 million. The approved waivers were for crash-damaged aircraft (\$94 million) and for orders received in the fourth quarter of the fiscal year from another military service (\$38 million). The fiscal year 2014 budget provided the purpose for the first waiver but not the second. Further, the FRCs did not provide the dollar amount for each waiver in their fiscal year 2014 budget.

- In the FRC section of the fiscal year 2016 Navy Working Capital Fund budget, which included the fiscal year 2014 actual carryover information, the FRCs adjusted the fiscal year 2014 actual carryover information for three approved carryover waivers totaling \$168 million. The approved waivers were for (1) crash-damaged aircraft (\$81 million), (2) orders received in the fourth quarter of the fiscal year from other military services (\$28 million), and (3) high flight hour F/A-18 Hornet aircraft (\$59 million). The purpose for the first two carryover waivers was included in prior fiscal year budgets, but the third waiver was included for the first time in the fiscal year 2016 budget. Without the new fiscal year 2014 waiver for high flight hour F/A-18 Hornet aircraft, the FRCs' actual carryover amount would have exceeded the allowable amount for fiscal year 2014 by about \$32 million instead of being reported at \$27 million under the allowable amount in the FRC 2016 budget. The Navy did not present the purpose or the amount of each waiver in the FRC section of the fiscal year 2016 Navy Working Capital Fund budget. Without this detailed waiver information, DOD decision makers and congressional defense committees would have difficulty determining the impact new waivers had on the carryover amount either being over or under the allowable amount.

The Navy did not consistently or completely present FRC carryover information associated with waivers in the FRC section of the Navy Working Capital Fund budgets because, according to Navy officials, the Financial Management Regulation describing the type of waiver information to be included in the annual working capital fund budgets is not specific. Specifically, the Financial Management Regulation does not require the military services to identify the dollar amount and purpose of each waiver in the budget. Complete information on waivers is critical because a new waiver can affect whether the actual adjusted carryover is over or under the allowable amount, as it did for fiscal year 2014. Internal control standards state that policies, procedures, techniques, and

mechanisms are needed to enforce management's directives.¹⁰ These processes should provide reasonable assurance that relevant, reliable, and timely information is communicated in financial reports, including reports on budget execution, financial statements, and other reports for internal and external use. The processes for calculating and reporting carryover information in the annual FRC budgets are examples of such controls. When carryover information related to approved waivers is not presented consistently or completely in an agency's budgets, federal policymakers and program managers may not have the information needed for decision making, increasing the risk that actions taken to better achieve the agency's missions will be ineffective.

FRC Actual Carryover Information Generally Exceeded Budget Estimates Because the FRCs Underestimated New Orders

The FRCs budgeted the carryover amount to be under the allowable amount in 10 out of the 11 fiscal years we reviewed. In fiscal year 2004, the budgeted amount was greater than the allowable amount by \$40 million. In 10 of the 11 years, the actual carryover information was greater than the budgeted carryover information by a low of \$30 million in fiscal year 2010 to a high of \$285 million in fiscal year 2007. According to Navy officials, these differences can be attributed to uncertainty in overseas contingency operations orders or changing customer requirements after budget preparations. Although the Navy has efforts ongoing to address these two issues in the future, we found that the Navy's guidance does not require trend analysis. Such analysis could help ensure more accurate estimates. Reliable budget estimates on carryover are critical because decision makers use this information when reviewing the FRCs' budgets. Table 3 summarizes the dollar amounts of actual adjusted and budgeted adjusted FRC carryover that were over or under the allowable dollar amounts and the differences, as shown in FRC budgets for fiscal years 2004 through 2014.¹¹

¹⁰GAO, *Standards for Internal Control in the Federal Government*, [GAO/AIMD-00-21.3.1](#) (Washington, D.C.: November 1999).

¹¹In developing the budgeted adjusted carryover that is over (under) the allowable amount, the FRCs calculate the allowable amount based on budgeted new orders. The FRCs update that calculation based on actual new orders received from customers when those data become available.

Table 3: Actual and Budgeted Adjusted Fleet Readiness Centers' Carryover That Was over or under the Allowable Amounts for Fiscal Years 2004 through 2014

Dollars in millions

Fiscal year	Actual adjusted carryover over (under) allowable amount	Budgeted adjusted carryover over (under) allowable amount	Difference
2004	\$5	\$40	(\$35)
2005	0 ^a	(89)	90
2006	16	(152)	168
2007	83	(202)	285
2008	10	(39)	49
2009	15	(92)	107
2010	22	(9)	30
2011	121	(13)	134
2012	86	(89)	175
2013	3	(33)	35
2014	(27)	(72)	45

Source: GAO analysis of Fleet Readiness Centers' budgets. | GAO-15-462

Notes: Dollar amounts do not always total because of rounding. These dollar amounts are actual dollars and are not adjusted for inflation.

^aThe FRCs' actual adjusted carryover slightly exceeded the allowable carryover amount in fiscal year 2005. However, because of rounding, the amount is shown as zero.

From fiscal years 2004 through 2014, the FRCs budgeted to receive about \$21.8 billion in new orders, but they actually received about \$22.5 billion in new orders, as shown in table 4. As a result, the FRCs' budgets underestimated new orders received from customers by a cumulative total of \$671 million over the 11-year period we reviewed. Because more orders were received than expected, this affected the amount of work to be performed and, in turn, the amount of work that would carry over at the end of the fiscal year. Notably, for the 6 consecutive fiscal years from fiscal year 2007 through fiscal year 2012, actual new orders exceeded budgeted new orders each year, for a cumulative total of over \$1.6 billion. For the other 5 fiscal years, budgeted new orders exceeded actual new orders. Table 4 compares the dollar amounts of FRC actual and budgeted new orders and the difference between these amounts for fiscal years 2004 through 2014.

Table 4: Actual and Budgeted Fleet Readiness Centers' New Orders for Fiscal Years 2004 through 2014

Dollars in millions			
Fiscal year	Actual new orders	Budgeted new orders	Difference
2004	\$1,679	\$1,866	(\$187)
2005	1,797	1,990	(193)
2006	1,942	2,149	(207)
2007	2,099	1,882	217
2008	2,068	1,789	279
2009	2,238	1,944	294
2010	2,166	1,859	307
2011	2,332	1,976	356
2012	2,295	2,083	212
2013	1,954	2,113	(159)
2014	1,882	2,130	(248)
Total	\$22,452	\$21,781	\$671

Source: GAO analysis of Fleet Readiness Centers' budgets. | GAO-15-462

Note: These dollar amounts are actual dollars and are not adjusted for inflation.

Navy officials acknowledged that the FRCs had difficulty accurately budgeting for new orders, as shown above. The officials stated that the FRCs develop their budgets based on information from customers. The officials also stated that the budgeted new order amounts are based on the amounts of appropriated funds included in the customers' budgets that are expected to be used for orders placed with the FRCs. Because customers' budgets are prepared about 2 years before the execution of actual work, customer requirements may change from the time they prepare their budgets to the time the orders are placed with the FRCs. Differences between budgeted and actual new orders for specific fiscal years, as shown in table 4 are discussed below.

- For fiscal years 2004 through 2006, Navy officials stated that actual new orders were less than budgeted new orders because of lower customer demand for components.
- For fiscal years 2007 through 2012, Navy officials stated that the FRCs underestimated the amount of new orders because workload for overseas contingency operations was not included in the budgeted amounts. This occurred because the Navy was uncertain of the amount of funds the FRCs would receive in the supplemental appropriations for depot maintenance work.

-
- For fiscal years 2013 and 2014, Navy officials stated that actual customer orders were below budgeted amounts because of the uncertainties associated with the implementation of the Budget Control Act of 2011.¹² In addition, officials stated that the Navy FRCs' primary customers experienced a fiscal year 2013 reduction in operation and maintenance funds because of excess carryover, resulting in the FRCs receiving fewer orders.¹³

To address these concerns about budgeting for orders, Navy officials stated that beginning with the fiscal year 2015 FRC budget, budgeted order amounts for overseas contingency operations were included in the budgeted amounts. Further, the Navy officials acknowledged that improved communication between the FRCs and their customers is needed to better ensure that budgeted orders are in line with customer demand. The officials stated that the FRCs are working with their customers so that the FRCs receive more reliable new order information to include in their future budgets. According to the officials, the combination of these two actions should help reduce the difference between budgeted and actual new orders in the future.

Although these two actions could help to improve future budgeted carryover information, we found that Naval Air Systems Command budget guidance does not require the FRCs to develop trend data on actual orders that could be used in developing budget estimates.¹⁴ Analyzing trends in budgeted to actual carryover data could be useful in assessing the reliability of budgeted data and developing more reliable budget estimates, but we found that the Naval Air Systems Command budget guidance does not require such analysis. Navy officials agreed that the guidance does not require the FRCs to develop trend data on actual orders. If the FRCs compared budgeted and actual orders for individual customers and identified variances, they could identify individual

¹²Pub. L. No. 112-25 (Aug. 2, 2011). This law, among other things, amended the Balanced Budget and Emergency Deficit Control Act of 1985 to provide for caps on future year discretionary spending and for automatic sequestration of funds should future legislation fail to meet deficit reduction targets by established deadlines.

¹³According to the explanatory statement accompanying DOD's fiscal year 2013 appropriations, the congressional conferees agreed to reduce the Navy's fiscal year 2013 operation and maintenance appropriation by \$120.9 million because of excess carryover. See 159 Cong. Rec. S1355 (Mar. 11, 2013).

¹⁴Naval Air Systems Command provides guidance to the FRCs on developing and submitting their annual budget estimates.

customers that consistently underestimate budgeted orders. The FRCs could then discuss the reliability of the estimates with these customers and make adjustments as necessary. Internal control standards state that managers need to compare actual performance to planned or expected results and analyze significant differences.¹⁵ By conducting such trend analysis, the FRCs could ensure that budgeted carryover data they provide to decision makers are more accurate and reliable.

Four Key Drivers Led to Carryover at the End of Fiscal Years 2013 and 2014, and the Navy Has Actions Under Way to Address Some of Them

Our analysis of 60 orders (and related amendments) with the largest amounts of carryover for fiscal years 2013 and 2014 (the most recent data available) identified four key drivers for carryover. These were (1) work that was scheduled to begin in the fourth quarter of the fiscal year that carried over into the next fiscal year, (2) orders for work on high flight hour F/A-18 Hornet aircraft, (3) orders for work on crash-damaged aircraft, and (4) orders involving parts shortages that delayed the performance of work. The Navy has actions under way to address carryover associated with the high flight hour F/A-18 Hornet aircraft and parts shortages. Actions to address the first driver are not necessary because fourth quarter orders are part of the normal business process, and any actions to address the third driver, crash-damaged aircraft, are limited because of the unique and unpredictable nature of the volume of and damage to aircraft and need for repairs.

Work on Orders Began in the Fourth Quarter of the Fiscal Year Resulting in Work Carrying Over into the Next Fiscal Year

Our analysis of 60 orders (and related amendments) for fiscal years 2013 and 2014 determined that 33 orders involved work that was scheduled to begin in the fourth quarter of the fiscal year and carry over into the next fiscal year. As discussed earlier in the report, some carryover is to be expected and is appropriate at the end of the fiscal year in order for the FRCs to operate efficiently and effectively. Without sufficient carryover, FRC officials stated that the FRCs could not (1) ensure that enough funded work would be available to continue operations into the next fiscal year and (2) retain the appropriate number of personnel with sufficient skill sets to perform depot maintenance work. Adequate carryover is particularly important when DOD operates under a continuing resolution, which results in FRC customers not receiving their full-year appropriations at the beginning of the fiscal year. This, in turn, may cause the FRCs to

¹⁵[GAO/AIMD-00-21.3.1.](#)

operate for several months into the next fiscal year relying mostly on funded work from prior year orders to continue operations because of the limitations on the amount of new orders customers may place with the FRCs at the beginning of the fiscal year in light of budget uncertainties.¹⁶ Carryover provides the FRCs the continuity of funded workload necessary to maintain operations from one year to the next. The following example shows how work started in the last quarter of the fiscal year results in work carrying over into the following fiscal year.

In July 2013, FRC Southeast accepted an order totaling \$26.5 million to repair 160 engine modules for the F414 engine, which is used in the F/A-18 Super Hornet. The order was amended in August 2013 to increase quantities to 197 engine modules and increase funding to \$32.4 million. According to FRC Southeast officials, the work on an engine module should take from 16 to 67 days, depending on which engine module is being repaired. Because of the number of engine modules to be repaired and the repair time necessary per module, FRC Southeast did not have sufficient time to complete the work on this order in fiscal year 2013 and thus carried over \$28.3 million of the \$32.4 million into fiscal year 2014. All work was completed on this order in May 2014.

Work on High Flight Hour F/A-18 Hornet Aircraft Contributed to Carryover

Our analysis of 60 orders (and related amendments) for fiscal years 2013 and 2014 determined that work on high flight hour F/A-18 Hornet aircraft contributed to carryover on 9 orders. One of the primary workloads at FRC Southwest and FRC Southeast is the F/A-18 Hornet. The first aircraft was manufactured in the late 1970s and became operational in the early 1980s. As an aircraft ages, it incurs additional inspections and structural repairs when required. One of those additional inspections occurs when an aircraft reaches 8,000 flight hours.¹⁷ The high flight hour aircraft inspections and repairs contributed to carryover because (1) structural repairs generally require more time to complete than nonstructural repairs and (2) work on the high flight hour aircraft delayed work on other F/A-18 aircraft because there were not enough FRC

¹⁶A continuing resolution is an appropriation act that provides budget authority to federal agencies to continue their operation when Congress and the President have not completed action on the regular appropriation acts by the beginning of the fiscal year.

¹⁷The inspections for structural weakness on the F/A-18 aircraft are required for the Navy to continue flying the aircraft past 8,000 flight hours.

engineers and artisans, support equipment, and facilities. Figures 2 and 3 are photographs of work on high flight hour F/A-18 Hornet aircraft being performed at an FRC.

Figure 2: Side View of Work on High Flight Hour F/A-18 Hornet Aircraft



Source: Naval Air Systems Command. | GAO-15-462

Figure 3: Top View of Work on High Flight Hour F/A-18 Hornet Aircraft



Source: Naval Air Systems Command. | GAO-15-462

When the FRCs receive high flight hour F/A-18 Hornet aircraft for inspection and, if necessary, for structural repairs, the FRCs perform a detailed inspection of the aircraft to identify structural weaknesses, such as metal fatigue and cracks in the aircraft, and determine what needs to be repaired. Next, the FRCs prepare a request for engineering information to obtain engineering support to develop repair solutions for the damaged areas of the aircraft. Structural repairs needed to fix the aircraft are nonstandard repairs that must be designed and approved by FRC engineers. According to FRC engineers and engineering information documents we reviewed, it may take as long as a year or more for an engineer to determine and document the step-by-step instructions needed to repair the aircraft. During this time, the FRCs order the required parts from the DOD supply system to repair the aircraft. If the parts are not in DOD's supply system, the FRCs either manufacture them or order them from a contractor. The length of time to determine what needs to be repaired, design a repair solution, and obtain or manufacture the parts needed to make the repairs contributed to carryover on the

orders. The following two examples describe work performed on high flight hour F/A-18 Hornet aircraft that contributed to carryover.

- In October 2012, FRC Southwest accepted an order totaling \$1.8 million to perform inspections and repairs on 5 high flight hour F/A-18 Hornet aircraft. This order was amended 14 times in fiscal year 2013 to increase the number of aircraft to 21 and increase funding to \$8.0 million. FRC Southwest did not complete work on any aircraft on this order in fiscal year 2013 because FRC Southwest was already working on other high flight hour aircraft from prior year orders. As a result, FRC Southwest carried over \$6.3 million on this order into fiscal year 2014. In fiscal year 2014, the order was amended twice, the number of aircraft was reduced from 21 aircraft to 20 aircraft, and the funding was reduced to \$7.6 million. The work completion date was extended into fiscal year 2015. As of the end of fiscal year 2014, FRC Southwest carried over \$3.7 million on this order into fiscal year 2015 and still needed to complete work on 18 of the 20 high flight hour aircraft.

FRC Southwest officials informed us that orders for high flight hour work from prior fiscal years delayed work on the fiscal year 2013 high flight hour order. For example, 15 high flight hour F/A-18 Hornet aircraft on fiscal years 2011 and 2012 orders required replacement of two structural components in the back section of the aircraft.¹⁸ To design the supporting step-by-step instructions for the removal and replacement of the structural components, 18 months and 5,100 work hours of nonrecurring engineering was required. The actual replacement of the structural components on each aircraft by FRC Southwest machinists, sheet metal workers, electricians, and mechanics required approximately 2,500 labor hours to complete. During the replacement procedure, the F/A-18 Hornets were placed in holding fixtures to stabilize the aircraft. Replacement of the structural components took about 16 to 18 weeks. FRC Southwest only had a limited number of personnel, holding fixtures, and available facilities (floor space) that could be used for this type of work. This delayed work on the fiscal year 2013 high flight hour order and work on other F/A-18 orders at FRC Southwest in fiscal years 2013 and 2014.

¹⁸The structural components that required replacement were the Y580 and Y590 formers. A former is a structural member of the aircraft fuselage and establishes the shape of the fuselage.

- In fiscal year 2013, FRC Southeast accepted an order totaling \$17 million with amendments to perform modifications to 14 F/A-18 Hornet aircraft. FRC Southeast did not complete work on any aircraft from this order in fiscal year 2013 because of the number of high flight hour aircraft already in process for repair. Because of engineering issues related to the high flight hour aircraft, FRC Southeast carried over \$16.9 million on this order into fiscal year 2014.

According to FRC Southeast officials and our review of order documentation, 6 of the 14 F/A-18 Hornet aircraft on this order are high flight hour aircraft. According to FRC Southeast officials, the major constraint in the repair process is the limited number of engineers FRC Southeast has to perform the tasks associated with repairing high flight hour aircraft. This limits the number of all F/A-18 Hornet aircraft—including non-high flight hour aircraft—that can be worked on and completed in a timely manner. Non-high flight hour aircraft are affected since these aircraft cannot move through the process because of the time spent working on high flight hour aircraft. This decrease in production has led to an increase in the number of aircraft in process at the end of the fiscal year and contributed to carryover. Because of the engineering constraint associated with high flight hour aircraft, FRC Southeast was only able to complete work on 1 F/A-18 Hornet aircraft on this fiscal year 2013 order and carried over \$16.1 million on this order into fiscal year 2015.

To show the magnitude of carryover associated with the F/A-18 Hornet program, we obtained and analyzed carryover associated with that program for fiscal years 2011 through 2014. Table 5 provides information on the dollar amounts of carryover and the number of months of carryover for work on the F/A-18 Hornet at FRC Southeast and FRC Southwest.

Table 5: Fleet Readiness Center Southeast and Southwest F/A-18 Hornet Carryover and Months of Carryover for Fiscal Years 2011 through 2014

Dollars in millions		
Fiscal year	Carryover	Months of carryover
2011	\$197.9	15
2012	206.8	18
2013	224.3	23
2014	224.8	25

Source: GAO analysis of Fleet Readiness Centers' data. | GAO-15-462

Notes: Data were not available prior to fiscal year 2011. These dollar amounts are actual dollars and are not adjusted for inflation.

As shown in table 5, the total months of carryover for F/A-18 Hornet aircraft work increased from 15 months to 25 months from fiscal year 2011 to fiscal year 2014. Because of the large dollar amount and number of months of carryover associated with F/A-18 Hornet aircraft, we obtained and analyzed production documentation for all F/A-18 Hornet aircraft and high flight hour F/A-18 Hornet aircraft from fiscal years 2010 through 2014. Table 6 provides information on the number of high flight hour and total F/A-18 Hornet aircraft for FRC Southeast and Southwest that were (1) accepted for repair, (2) in process at fiscal year-end, and (3) completed at the end of the fiscal year for fiscal years 2010 through 2014.

Table 6: Fleet Readiness Center Southeast and Southwest F/A-18 Hornet Aircraft Workload by High Flight Hour and Total

Fiscal year	High flight hour F/A-18 Hornet aircraft			Total F/A-18 Hornet aircraft		
	Number accepted for repair	Number in process at fiscal year-end	Number completed	Number accepted for repair	Number in process at fiscal year-end	Number completed
2010	20	14	9	105	84	80
2011	37	33	18	117	112	89
2012	51	68	16	118	164	66
2013	33	84	17	89	190	63
2014	20	92	12	59	184	65

Source: GAO analysis of Fleet Readiness Centers' data. | GAO-15-462

As shown in table 6, our analysis identified the following information related to the F/A-18 Hornet workload.

- The number of high flight hour F/A-18 Hornet aircraft accepted for repair was more than the number of high flight hour F/A-18 Hornet aircraft completed in each of the 5 fiscal years. As a result, the number of high flight hour F/A-18 Hornet aircraft in process steadily increased from 14 at the end of fiscal year 2010 to 92 at the end of fiscal year 2014.
- The number of total F/A-18 Hornet aircraft accepted for repair was more than the number of F/A-18 Hornet aircraft completed each year, except for fiscal year 2014. As a result, the number of total F/A-18 Hornet aircraft in process increased from 84 at the end of fiscal year 2010 to 190 at the end of fiscal year 2013 and then slightly decreased to 184 at the end of fiscal year 2014. According to FRC Southwest officials, the reason for the improvement in fiscal year 2014 was that FRC Southwest focused on completing non-high flight hour aircraft during the last part of the fiscal year.

FRC officials acknowledged that they need to increase production for the F/A-18 Hornet aircraft and have taken the following actions to do so. First, FRC Southeast has implemented and FRC Southwest was in the process of implementing critical chain project management.¹⁹ A central tenet of critical chain project management is to limit work in process on the F/A-18 Hornet aircraft to the capacity of whatever constraints may be in place. FRC Southeast identified a lack of engineers as the constraint and 17 to 20 as the optimum number of aircraft to be worked on at one time. As a result, FRC Southeast stopped work on several aircraft and placed these aircraft in a work-stop (frozen) category to enable production and engineering to focus on the 17 to 20 aircraft. FRC Southeast officials informed us that to increase production, it hired 20 engineers in fiscal year 2014 and plans to hire 15 engineers and 20 to 25 artisans in fiscal year 2015. Similarly, FRC Southwest identified a lack of artisans and engineers as the constraint and 43 as the optimum number of aircraft to be worked on at one time. FRC Southwest officials informed us that it hired 5 engineers and 29 artisans in fiscal year 2014 and plans to hire 28 engineers and 66 artisans in fiscal year 2015. In addition, FRC Southwest is renovating a hangar to provide additional work space for the work flow of the F/A-18 Hornet.

Furthermore, the Navy is developing a comprehensive service life extension program for the F/A-18 Hornet to extend its useful life beyond 8,000 flight hours. Modifications to the aircraft resulting from the service life extension program are expected to extend the airworthiness of F/A-18 Hornet aircraft to 10,000 flight hours. According to Navy officials, engineering for the F/A-18 Hornet service life extension program is expected to be completed in 2017, and final modifications to the aircraft are expected to be ready for implementation in 2019.

Repair of Crash-Damaged Aircraft Contributed to Carryover

Our analysis of 60 orders (and related amendments) for fiscal years 2013 and 2014 determined that 10 orders involved crash-damaged aircraft. For crash-damaged aircraft, the requirements to repair the aircraft are largely unknown prior to inspection, and the repair solutions are based on the

¹⁹Critical chain project management is a process used to plan and manage projects based on available resources and helps identify key areas for process improvement to increase efficiency. FRC Southeast and Southwest have used this process to identify key areas for improvement by identifying constraints and managing to those constraints to determine the maximum amount of work in process that they can support.

damage and therefore unique to each aircraft. Our discussions with Navy FRC officials and a review of supporting documentation found that in fiscal years 2013 and 2014, the Navy FRCs had \$82.8 million for 27 aircraft and \$81.1 million for 32 aircraft, respectively, in carryover on orders to repair crash-damaged aircraft.²⁰ These crash-damaged aircraft incurred damage from incidents that included midair collisions, fire/heat damage, combat damage, accidents causing wing and fuselage cracks, and arresting/landing gear mishaps. Figures 4 and 5 are photographs of collision or fire damage on F/A-18 Super Hornet aircraft.

Figure 4: F/A-18 Super Hornet Aircraft with Collision Damage



Source: Naval Air Systems Command. | GAO-15-462

²⁰Crash-damaged aircraft included AV-8B, CH-53E, EA-18G, F-5N, MH-53E, MH-60R, TAV-8B, UH-1Y, and various models of the F/A-18.

Figure 5: F/A-18 Super Hornet Aircraft with Fire Damage



Source: Naval Air Systems Command. | GAO-15-462

When crash-damaged aircraft arrive at the FRCs for repair, the FRCs inspect the aircraft for damage and determine what needs to be repaired. Similar to when repairs are identified on high flight hour F/A-18 Hornet aircraft, the FRCs require engineering support to develop repair solutions for the damaged areas of the aircraft. As engineering develops the repair solutions, the FRCs order the required parts from the DOD supply system, or if the parts are not in DOD's supply system, the FRCs manufacture the parts or order them from a contractor. In some cases, the FRCs manufacture parts based on the unique damage to the aircraft and the parts needed to repair the damage. Once the repair solutions are determined and parts are obtained, the FRCs can repair the aircraft. The entire process can take 2 or more years to complete, depending on what needs to be repaired on the aircraft. The following are two carryover examples of crash-damaged aircraft orders on the F/A-18 Super Hornets at FRC Southwest.

- In August 2011, FRC Southwest accepted an order totaling \$24 million to repair damage on one F/A-18 Hornet aircraft and two F/A-18 Super Hornet aircraft. This order was amended four times from January 2013 through January 2014 to decrease the funding to \$22.0 million, remove the F/A-18 Hornet aircraft, and extend the work completion date into fiscal year 2015 for the two F/A-18 Super Hornet aircraft. Because of delays in receiving the parts to repair the aircraft

and to complete the engineering services needed to determine the individual tasks to repair the aircraft, FRC Southwest carried over \$21.7 million on this \$22.0 million order into fiscal year 2014.

One of the F/A-18 Super Hornet aircraft experienced a landing gear brake fire causing substantial damage to its center fuselage, main landing gear, and right inner wing panel and was awaiting wing skins from the manufacturer. No repair parts were available from an alternate source, and FRC Southwest has no capability to manufacture the parts. The other F/A-18 Super Hornet aircraft experienced an engine fire causing substantial damage and rendering the aircraft unable to fly. This aircraft was being analyzed by FRC Southwest to determine what needed to be repaired and to develop a repair solution. Furthermore, for both of these aircraft, engineering and logistics support will be needed to research and identify the parts needed to accomplish the repairs to the structure of the aircraft. Finally, repairs on the aircraft are expected to be further delayed because FRC Southwest does not have a sufficient number of qualified artisans to perform the work on the aircraft and available floor space to begin the repairs. Consequently, as of the end of fiscal year 2014, the carryover was \$21.5 million on this \$22 million order initially accepted in August 2011.

- In July 2011, FRC Southwest accepted an order totaling \$18.7 million to perform special rework on one F/A-18 Super Hornet aircraft that was involved in a midair collision with another Navy aircraft. This order was amended five times from July 2011 through January 2014 to increase the funding to \$20.8 million and to extend the work completion date into fiscal year 2015. This aircraft had substantial damage to its airframe, wings, and flight control surfaces, rendering the aircraft unable to fly. As a result, this aircraft is being used as a prototype for a replacement of the center fuselage section on an F/A-18 Super Hornet. In order for FRC Southwest to make this repair it will need (1) a Super Hornet alignment fixture that holds the aircraft during the repair process and (2) engineering and logistics support services to research and identify the parts needed to accomplish the repairs to the structure of the aircraft. Consequently, as of the end of fiscal year 2014—more than 3 years after the order was accepted—carryover was \$18.2 million on this \$20.8 million order.

Parts Needed to Perform Work Were Not Readily Available and Contributed to Carryover

Our analysis of 60 FRC orders (and related amendments) for fiscal years 2013 and 2014 determined that parts shortages contributed to carryover on 12 orders. Parts were not available to perform the work because the DOD supply system did not maintain sufficient parts in the right mix to meet demand because of inaccurate forecasts of parts needed to perform the work. Without the DOD supply system maintaining the right mix and sufficient quantities of spare parts, the FRCs cannot complete their funded workload timely and efficiently. In order to obtain parts from the DOD supply system, the FRCs order them through the Defense Logistics Agency (DLA).²¹ However, if DLA is unable to provide the parts, the FRCs may use other methods to obtain the parts, such as obtaining parts from other assets (e.g., aircraft or engines), manufacturing the parts, or obtaining the parts through use of their local procurement authority. If the FRCs manufacture the parts, they must have the raw material to perform the work and obtain the specifications of the parts to be made. While these methods allow work to continue, obtaining the needed parts this way is inefficient.

Most of the parts shortages that we identified were for component work performed at FRC East, which is largely responsible for repairing components used on end items in military equipment, such as the H-53 helicopter. Our analysis of FRC East orders for fiscal years 2013 and 2014 determined that FRC East had problems obtaining parts to repair components used on the H-53 helicopter and on various engines. Specifically, work at FRC East was discontinued on 845 and 1,074 components at the end of fiscal years 2013 and 2014, respectively. In these instances, the items were packed in storage boxes or containers and sent to a warehouse until the needed parts were obtained. Once parts were obtained, the items were sent back to the production area for repair. According to FRC East officials and our analysis of FRC East parts shortage data, the average length of time that an item was maintained in the warehouse because work was discontinued because of lack of parts was 147 days and 148 days in fiscal years 2013 and 2014, respectively. Table 7 shows the aging schedule of the items for which work was discontinued because of lack of parts at FRC East as of September 2014.

²¹DLA is the FRCs' primary source for spare parts. DLA manages nearly 6 million items and is the major supplier of spare parts for the military services.

Table 7: Number of Days Repair Items Waited for Parts at Fleet Readiness Center East as of September 2014

Number of days waiting for needed repair parts	Number of items	Percentage of total
Less than 30	93	9
From 30 to 89	412	38
From 90 to 179	261	24
From 180 to 360	190	18
More than 360	118	11
Total	1,074	100

Source: GAO analysis of Fleet Readiness Center East parts shortage data. | GAO-15-462

The following example illustrates how parts shortages contributed to carryover. In fiscal year 2013, FRC East accepted an order with amendments totaling \$84.4 million to repair 4,087 components for the H-53 helicopter. FRC East began work on the components in October 2012. According to officials and our review of FRC East production data, work was not completed on 641 components at the end of fiscal year 2013 because FRC East could not obtain parts to perform the work. Some of the parts that FRC East could not obtain were spur gears, sleeve assemblies, and piston assemblies. Because of these parts shortages, work was delayed, and FRC East carried over \$35.9 million into fiscal year 2014. During fiscal year 2014, FRC East continued work on the order, but it did not complete the work on 197 components by the end of the fiscal year because it still could not obtain the parts needed to perform the work. Because of these parts shortages, FRC East carried over \$10.5 million on this fiscal year 2013 order into fiscal year 2015.

To address these parts shortages and their effect on carryover, the FRCs have taken action to improve their parts management process. Specifically, the FRCs, in collaboration with DLA, implemented the Inventory Management and Stock Positioning system. This inventory system integrates DLA and Navy supply systems to allow for increased visibility of inventory items by both the FRCs and DLA and streamlines direct material ordering to DLA to provide parts to the FRCs when needed. The Inventory Management and Stock Positioning system was implemented at FRC Southwest in June 2013, FRC Southeast in October 2013, and FRC East in April 2014. It is too soon to determine whether carryover associated with parts shortages will be reduced as a result of the recent implementation of this system because it can take up to 18 months or more to obtain long lead time inventory items.

According to FRC and DLA officials, the key information required under the Inventory Management and Stock Positioning system is the gross demand plan, which provides eight quarters of data on the parts needed at the FRCs.²² The new system is intended to improve forecasting of parts needed to perform work. In order for the gross demand plan to accurately forecast demand for parts, the bill of materials (parts needed to repair end items) and replacement factors need to be accurate. FRC officials stated that they perform validations of parts requirements against the bill of materials and verifications of replacement factors to ensure the gross demand plan is accurate. To maintain the accuracy of the gross demand plan, the FRCs validate the bill of materials and replacement factors on a continuing basis.

Conclusions

Our review found that for the period from fiscal year 2004 through fiscal year 2014, the FRCs' adjusted carryover was over the allowable amount in all years but fiscal year 2014. Further, we found that during this period, the Navy did not consistently or comprehensively identify the purpose and amount for waivers in its budgets to Congress. This occurred because the DOD Financial Management Regulation did not include specific requirements for the waiver information to be included in the budgets submitted to Congress. Without consistent and complete reporting of waiver information, policymakers do not have complete information for making informed budget decisions. Furthermore, budget estimates were generally less than actual carryover because the FRCs underestimated new orders to be received from customers. While the Navy has taken action to include all orders, including orders funded for overseas contingency operations in its budgets, its budget guidance does not

²²We reported in June 2014 that gross demand planning, a form of collaborative forecasting for spare parts between DLA and the Navy, improved demand plan accuracy—the accuracy of the forecasted demand for a part against actual demands for the part—at FRC Southwest over the last several months of 2013 and early 2014. An improvement in demand plan accuracy means that part availability is improving. For additional information on collaborative forecasting for spare parts between DLA and the military services, see GAO, *Defense Inventory: Actions Needed to Improve the Defense Logistics Agency's Inventory Management*, [GAO-14-495](#) (Washington, D.C.: June 19, 2014). For additional information on DOD's efforts to improve the accuracy of demand forecasting for spare parts, see GAO, *Defense Inventory: Services Generally Have Reduced Excess Inventory, but Additional Actions Are Needed*, [GAO-15-350](#) (Washington, D.C.: Apr. 20, 2015), and *Defense Inventory: Actions Underway to Implement Improvement Plan, but Steps Needed to Enhance Efforts*, [GAO-12-493](#) (Washington, D.C.: May 3, 2012).

require the FRCs to develop trend data on actual orders that could be used in developing more reliable budget estimates. Reliable carryover information is essential for Congress and DOD to effectively perform their oversight responsibilities, including reviewing and making well-informed decisions on the FRCs' budget.

Recommendations for Executive Action

We are making three recommendations to the Secretary of Defense to improve budgeting for carryover.

We recommend that the Secretary of Defense direct the Under Secretary of Defense (Comptroller) to clarify existing guidance in the DOD Financial Management Regulation to require that the purpose and amount of each carryover waiver be included in the military services' future annual budget submissions to Congress.

We recommend that the Secretary of Defense direct the Secretary of the Navy to direct the FRCs to provide the purpose and amount of all approved carryover waivers that will be included in future annual budget submissions to Congress.

We recommend that the Secretary of Defense direct the Secretary of the Navy to direct Naval Air Systems Command to augment its budget guidance to include an analysis of trend data on actual order information that affects carryover and adjust budget estimates as necessary.

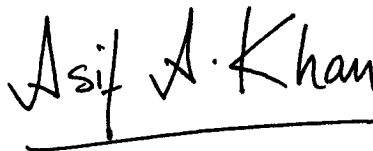
Agency Comments

We provided a draft of this report to DOD for comment. In its written comments, which are reprinted in appendix II, DOD concurred with the three recommendations and cited actions planned or under way to address them. Specifically, in response to our recommendations related to including the purpose and amount of each carryover waiver in the military services' future annual budget submissions to Congress, DOD commented that it has added a clarifying statement to a draft revision of the DOD Financial Management Regulation that will be effective for the fiscal year 2017 President's budget and subsequent budgets. In addition, DOD stated that the Office of the Under Secretary of Defense (Comptroller) will ensure that the purpose and amount of each approved carryover waiver will be included in all future annual budget submissions to Congress. In response to our recommendation relating to analyzing trend data on actual order information that affects carryover and adjusting budget estimates as necessary, DOD stated that the Office of the Under Secretary of Defense (Comptroller) will evaluate whether an analysis of

trend data on actual year-end order information that affects carryover was included as a factor for the fiscal year 2017 President's budget. DOD stated that as part of its review process, the Office of the Under Secretary of Defense (Comptroller) will hold discussions with the Navy to ascertain how prior year trends were incorporated into the carryover estimates, including an evaluation of deviations between actual and budgeted carryover for fiscal year 2015.

We are sending copies of this report to the appropriate congressional committees, the Secretary of Defense, the Secretary of the Navy, and the Under Secretary of Defense (Comptroller). In addition, the report is available at no charge on the GAO website at <http://www.gao.gov>.

If you or your staff have any questions about this report, please contact me at (202) 512-9869 or khana@gao.gov. Contact points for our Offices of Congressional Relations and Public Affairs may be found on the last page of this report. Key contributors to this report are listed in appendix III.

A handwritten signature in black ink that reads "Asif A. Khan". The signature is written in a cursive style with a horizontal line underneath the name.

Asif A. Khan
Director, Financial Management and Assurance

Appendix I: Scope and Methodology

To determine the extent to which the Navy Fleet Readiness Centers' (FRC) actual carryover differed from the allowable amounts from fiscal years 2004 through 2014 and the reasons for any differences, we obtained and analyzed FRC reports and Navy Working Capital Fund budget estimates submitted to Congress that contained information on actual carryover and the allowable amount of carryover for fiscal years 2004 through 2014. We analyzed carryover since fiscal year 2004 because prior to fiscal year 2004, the Department of Defense (DOD) had a different policy for determining the allowable amount of carryover. We met with responsible officials from Navy headquarters and the FRCs to determine the reasons for variances between actual carryover and the allowable amount. Further, we identified and analyzed any adjustments made by the Navy that increased the allowable carryover amounts or reduced the amount of carryover. We reviewed DOD's guidance for waivers to the carryover policy and discussed any waivers with officials from the Office of the Under Secretary of Defense (Comptroller), Navy headquarters, and the FRCs to obtain explanations for the waivers.

To determine the extent to which the Navy FRCs' reported budget information on carryover differed from reported actual information on carryover from fiscal years 2004 through 2014 and the reasons for any differences, we obtained and analyzed FRC reports and Navy Working Capital Fund budget estimates submitted to Congress that contained information on budgeted and actual new orders, revenue, and carryover data for fiscal years 2004 through 2014. We analyzed carryover since fiscal year 2004 because prior to fiscal year 2004, DOD had a different policy for determining the allowable amount of carryover. We met with responsible officials from Navy headquarters and the FRCs to determine the reasons for variances between budgeted and actual new order, revenue, and carryover amounts. We also met with these officials to discuss actions the Navy was taking to improve budgeting and management of carryover, including reducing carryover amounts.

To determine the key drivers for orders with large carryover balances for fiscal years 2013 and 2014 and the actions, if any, the Navy's FRCs are taking or planning to take to reduce carryover, we met with responsible officials from Navy headquarters and FRCs to identify contributing factors that led to carryover. We focused on fiscal year 2013 and 2014 carryover balances to identify current issues contributing to carryover. We also performed walk-throughs of the three FRCs' depot maintenance operations to observe the work being performed and discussed with officials the causes for workload carrying over from one fiscal year to the next. Further, to corroborate the information provided by FRC officials, we

obtained and analyzed 60 orders (30 orders each for fiscal years 2013 and 2014) that had the largest dollar amounts of carryover. Carryover amounts associated with these orders represented 38 percent and 33 percent of the FRCs total carryover for fiscal years 2013 and 2014, respectively. We reviewed the orders and amendments for each of the orders and discussed the information in these documents with the three FRCs to determine the causes for the carryover. We summarized and categorized the results. We also discussed and obtained documentation on the actions the FRCs are taking to better manage and reduce carryover.

We obtained the financial and logistical data in this report from official budget documents and the Defense Industrial Financial Management System used by the FRCs. To assess the reliability of the data, we (1) reviewed and analyzed the factors used in calculating carryover for the completeness of the elements included in the calculation, (2) interviewed Navy officials knowledgeable about the carryover data, (3) reviewed GAO reports on depot maintenance activities, and (4) reviewed customer orders submitted to the FRCs to determine whether they were adequately supported by documentation. In reviewing these orders, we obtained the status of the carryover at the end of the fiscal year. On the basis of procedures performed, we have concluded that these data were sufficiently reliable for the purposes of this report. We performed our work at the Office of the Under Secretary of Defense (Comptroller) and the Office of the Assistant Secretary of the Navy (Financial Management and Comptroller), Washington, D.C.; Naval Air Systems Command and Commander FRCs at Naval Air Station Patuxent River, Maryland; FRC East at Marine Corps Air Station, Cherry Point, North Carolina; FRC Southeast at Naval Air Station, Jacksonville, Florida; and FRC Southwest at Naval Air Station North Island, San Diego, California.

We conducted this performance audit from June 2014 to June 2015 in accordance with generally accepted government auditing standards. Those standards require that we plan and perform the audit to obtain sufficient, appropriate evidence to provide a reasonable basis for our findings and conclusions based on our audit objectives. We believe that the evidence obtained provides a reasonable basis for our findings and conclusions based on our audit objectives.

Appendix II: Comments from the Department of Defense



COMPTROLLER

OFFICE OF THE UNDER SECRETARY OF DEFENSE
1100 DEFENSE PENTAGON
WASHINGTON, DC 20301-1100

JUN 1 2015

Mr. Asif A. Khan
Director
Financial Management and Assurance
Government Accountability Office
441 G Street, N.W.
Washington, DC 20548

Dear Mr. Khan:

This is the Department of Defense (DoD) response to the GAO draft report (GAO-15-462), "NAVY WORKING CAPITAL FUND: Budgeting for Carryover at Fleet Readiness Centers Could Be Improved," dated May 2015 (GAO Code 197137). Comments on the draft report recommendations are included in the enclosure. Actions to improve the budgeting for and management of carryover noted in the draft report are underway.

Sincerely,

John P. Roth

Enclosure:
As stated



GAO DRAFT REPORT DATED MAY 1 2015
GAO-15-462 (GAO CODE 197137)

“NAVY WORKING CAPITAL FUND: BUDGETING FOR CARRYOVER AT FLEET
READINESS CENTERS COULD BE IMPROVED”

DEPARTMENT OF DEFENSE COMMENTS
TO THE GAO RECOMMENDATION

RECOMMENDATION 1: The GAO recommends that the Secretary of Defense direct the Office of the Under Secretary of Defense (Comptroller) to clarify existing guidance in the DOD Financial Management Regulation to require that the purpose and amount of each carryover waiver be included in the military services’ future annual budget submissions to Congress.

DoD RESPONSE: Concur. A clarifying statement has been added to the draft revision of Volume 2b Chapter 9 of the DoD Financial Management Regulation. The draft May 2015 revision is based upon the latest published position of December 2014. This change will be incorporated for the FY 2017 President’s budget and subsequent budgets.

RECOMMENDATION 2: The GAO recommends that the Secretary of Defense direct the Secretary of the Navy to direct the FRCs to provide the purpose and amount of all approved carryover waivers that will be included in future annual budget submissions to Congress.

DoD RESPONSE: Concur with recommendation as written. Further, the Office of the Under Secretary of Defense (Comptroller) will ensure that the purpose and amount of each specific approved carryover waiver will be included in all future annual budget submissions to Congress.

RECOMMENDATION 3: The GAO recommends that the Secretary of Defense direct the Secretary of the Navy to direct the Naval Air Systems Command to augment its budget guidance to include an analysis of trend data on actual order information that affects carryover and adjust budget estimates as necessary.

DoD RESPONSE: Concur with recommendation as written. Further, the Office of the Under Secretary of Defense (Comptroller) will evaluate whether an analysis of trend data on actual yearend order information affecting carryover was included as a factor for the FY 2017 President’s budget. This analysis will continue in subsequent budgets. Discussions will be held during the review process to ascertain how prior year trends were incorporated into the carryover estimates that also include documented customer requirements and Overseas Contingency Operations. In addition, a comparison analysis of the FY 2015 actual carryover to the FY 2015 budgeted carryover will be part of the budget analysis to include an evaluation of deviations from allowable ceilings.

Appendix III: GAO Contact and Staff Acknowledgments

GAO Contact

Asif A. Khan, (202) 512-9869 or khana@gao.gov

Staff Acknowledgments

In addition to the contact named above, Greg Pugnetti (Assistant Director), Steve Donahue, Keith McDaniel, and Hal Santarelli made key contributions to this report.

GAO's Mission

The Government Accountability Office, the audit, evaluation, and investigative arm of Congress, exists to support Congress in meeting its constitutional responsibilities and to help improve the performance and accountability of the federal government for the American people. GAO examines the use of public funds; evaluates federal programs and policies; and provides analyses, recommendations, and other assistance to help Congress make informed oversight, policy, and funding decisions. GAO's commitment to good government is reflected in its core values of accountability, integrity, and reliability.

Obtaining Copies of GAO Reports and Testimony

The fastest and easiest way to obtain copies of GAO documents at no cost is through GAO's website (<http://www.gao.gov>). Each weekday afternoon, GAO posts on its website newly released reports, testimony, and correspondence. To have GAO e-mail you a list of newly posted products, go to <http://www.gao.gov> and select "E-mail Updates."

Order by Phone

The price of each GAO publication reflects GAO's actual cost of production and distribution and depends on the number of pages in the publication and whether the publication is printed in color or black and white. Pricing and ordering information is posted on GAO's website, <http://www.gao.gov/ordering.htm>.

Place orders by calling (202) 512-6000, toll free (866) 801-7077, or TDD (202) 512-2537.

Orders may be paid for using American Express, Discover Card, MasterCard, Visa, check, or money order. Call for additional information.

Connect with GAO

Connect with GAO on [Facebook](#), [Flickr](#), [Twitter](#), and [YouTube](#). Subscribe to our [RSS Feeds](#) or [E-mail Updates](#). Listen to our [Podcasts](#). Visit GAO on the web at www.gao.gov.

To Report Fraud, Waste, and Abuse in Federal Programs

Contact:

Website: <http://www.gao.gov/fraudnet/fraudnet.htm>

E-mail: fraudnet@gao.gov

Automated answering system: (800) 424-5454 or (202) 512-7470

Congressional Relations

Katherine Siggerud, Managing Director, siggerudk@gao.gov, (202) 512-4400, U.S. Government Accountability Office, 441 G Street NW, Room 7125, Washington, DC 20548

Public Affairs

Chuck Young, Managing Director, youngc1@gao.gov, (202) 512-4800, U.S. Government Accountability Office, 441 G Street NW, Room 7149, Washington, DC 20548



Please Print on Recycled Paper.